

**REMARKS**

The Examiner rejected claims 1-7, 9-18, and 20-22 under 35 U.S.C. 103(a) as being unpatentable over Carlson (US Patent 6,861,865) in view of Flower (US Patent 5,688,232).

The Examiner rejected claims 8 and 19 under 35 U.S.C. 103(a) as being unpatentable Carlson/Flower, and in further view of Nogami et al. (US Patent 5,459,342).

Applicants respectfully traverse the §103(a) rejections with the following arguments.

## 35 USC § 103 Rejections

As to claim 1, the Examiner rejected claim 1 under 35 U.S.C §103 (a) stating that “Carlson teaches...one or more repairable circuit elements” but does not teach “a pulse generator or cycle counter” but that Flower teaches “ an integrated circuit [Fig. 2, controller ASIC 20, col. 4 lines 24-29] comprised of a pulse generator and a cycle counter for counting cycles of said pulsed signal” and “a pulse generator and a cycle counter comprise *a life timer circuit* for the controller 20.”

First Applicants respectfully point out neither FIG. 2 or col. 4, lines 24-29 teaches what the Examiner alleges. No pulse generator or cycle counter is taught in FIG. 2 or col. 4 lines 24-29.

Second, Applicants point out that Flower teaches in FIG. 3 and in col. 3 line 34 “*a life timer circuit* 52 having a clock which can be started at the date of manufacture” and does not teach specifically the life timer circuit 52 includes “a pulse generator” and “a cycle counter” as required by Applicants claim 1. Further, the Examiner has not provided any evidence that a pulse generator and a cycle counter are inherent in the duration timer/ life timer circuit of Flower. For example, the duration timer/life timer circuit of Flower could be based on counting radioactive decay emissions or by measuring the charge on a capacitor instead of using both a pulse generator and a cycle counter.

Third, Applicants understand the rejection as a modification of Carlson (primary reference) by Flower (secondary reference), yet the Examiner has stated “The teachings of Carlson would improve the system of Flower...extending the useful lifetime of the device” as the reason to combine references which is a modification of Flower by Carlson which Applicants

respectfully maintain is improper. The Examiner must provide a motivation that modifies Carlson by Flower.

Fourth, Applicants respectfully maintain the rejection is improper because there is no suggestion in the prior art to combine the references as required by *Karsten Mfg. Corp. v. Cleveland Gulf Co.*, 242 F.3d 1376, 1385, 58 U.S.P.Q.2d 1286, 1293 (Fed. Cir. 2001) which states “In holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention.” The alleged motivation “Carlson would improve the system of Flower” does originate from prior art but has been supplied by the Examiner. Therefore, the Examiner has not established his *prima facie* case of obviousness.

Based on the preceding arguments, Applicants respectfully maintain that claim 1 is not unpatentable over Carlson in view of Flower and are in condition for allowance. Since claims 2-11 depend from claim 1, Applicants respectfully maintain that claims 2-11 are likewise in condition for allowance.

As to claim 4, the Examiner stated “Flower teaches a memory circuit for storing a cycle count [EEPROM] col. 4, line 43.”

First Applicants point out that the EEPROM 26 of Flower stores information from duration timer 32 not life timer 52 and that information is related to treatment not a count from the duration timer as the Examiner alleges. See, for example, Flower col. 3, lines 45-48 which states “The iontophoretic drug delivery of the present invention also includes an EEPROM, having sufficient memory, coupled to the microprocessor for recording a date, time and or

duration of usage by the patient.” There is no teaching in Flower that EEPROM 26 has the capability to store “a cycle count of the number of cycles counted since initial power up” as Applicants claim 4 requires.

Second, Applicants respectfully point the Examiner has not taken into all the limitations of Applicants claim 4, to wit “to resume counting from said stored cycle count after a power down/power up cycle of said integrated circuit.” Applicants point out that Flower does not have the capability of storing a count and resuming from the stored count, and that in fact, Flower has no need to resume from a stored count, because Flower is always powered and always counting from the day of manufacture. See Flower col. 3. lines 38-39 which states “when the clock has timed 5 years from the date of manufacture.”

Based on the preceding arguments, Applicants respectfully maintain that claim 4 is not unpatentable over Carlson in view of Flower and is in condition for allowance.

As to claim 6, the Examiner stated that “it would have been obvious to one of ordinary skill in the art to comprise a subset of bits encoding a current count.” First Applicants point out that neither Carlson or Flower teach or suggest “wherein said trigger signal comprises a subset of a set of bits encoding a current cycle count of said cycle counter” as Applicants claim 6 requires. Second, the Examiner has provided no evidence or reason that one of ordinary skill in the art would inherently perform such a modification of Carlson in view of Flower and thus has impermissibly shifted the burden of proof from the Examiner to Applicants.

Based on the preceding arguments, Applicants respectfully maintain that claim 6 is not unpatentable over Carlson in view of Flower and is in condition for allowance.

As to claim, 11, the Examiner stated “it would have been obvious to one of ordinary skill in the art to provide a redundant cycle counter.” Applicants point out that neither Carlson or Flower teach “a redundant cycle counter” as Applicants claim 11 requires.

First point out that Carlson teaches a in FIG. 2a, a single logic block selector 230 and in FIG. 2, Flower teaches a single controller circuit 20 that contains life timer 52. Further, the life timer 52 of flower does not contain a cycle counter as argued *supra*, therefore could not contain a redundant cycle counter.

Second, there is no teaching in Carlson of both “repairing said repairable circuit element ...when said cycle count reaches said *predetermined cycle count*” as in Applicants claim 1, and “replace said cycle counter with said redundant cycle counter when said cycle counter reaches a *fixed cycle count*” as in Applicants claim 11 which depends from Applicants claim 1. Carlson has one count, Applicants have two counts. Therefore, Carlson is not capable of replacing “said cycle counter with said redundant cycle counter when said cycle counter reaches a fixed cycle count” as Applicants claim 11 requires.

Third, the Examiner has provided no evidence that one of ordinary skill in the art would perform such a modification to Carlson. Applicants point out while the Examiner alleges Flower teaches “integrated circuits have limited lifetimes,” Applicants point out that the logic block selector of Carlson is rarely used (because the repair is effected by logic block selector 230 blowing address fuses or setting jumpers and then is not required) and thus would not be expected to fail. The Examiner has provided no why reason one of ordinary skill in the art would believe such a rarely used circuit would fail (see Carlson col. 3, lines 2-5 and lines 17-19) and thus has impermissibly shifted the burden of proof from the Examiner to Applicants.

Based on the preceding arguments, Applicants respectfully maintain that claim 11 is not unpatentable over Carlson in view of Flower and is in condition for allowance.

As to claims 12-18 and 20-22 the Examiner stated “Carlson and flower also teaches the method implemented by the claimed circuit.” Applicants assume the Examiner has rejected claims 12-18 and 20-22 for the reasons cited for rejecting corresponding circuit claims 1-7 and 9-11.

As to claim 12, the Examiner rejected claim 12 under 35 U.S.C §103 (a) stating that “Carlson teaches...one or more repairable circuit elements” but does not teach “a pulse generator or cycle counter” but that Flower teaches “a pulse generator and a cycle counter for counting cycles of said pulsed signal.”

First Applicants respectfully point out neither FIG. 2 or col. 4, lines 24-29 teaches what the Examiner alleges. No pulse generator or cycle counter is taught in FIG. 2 or col. 4 lines 24-29.

Second, Applicants point out that Flower teaches in FIG. 3 and in col. 3 line 34 “a life timer circuit 52 having a clock which can be started at the date of manufacture” and does not teach specifically the life timer includes “providing a pulse generator for generating a pulsed signal” and “providing a cycle counter for counting cycles of said pulsed signal” as required by Applicants claim 12. Further, the Examiner has not provided any evidence that a pulse generator and a cycle counter are inherent in the duration timer/ life timer circuit of Flower. For example, the duration timer/life timer circuit of Flower could be based on counting radioactive decay

emissions or by measuring the charge on a capacitor instead of using both a pulse generator and a cycle counter.

Third, Applicants understand the rejection as a modification of Carlson (primary reference) by Flower (secondary reference), yet the Examiner has stated “The teachings of Carlson would improve the system of Flower...extending the useful lifetime of the device” as the reason to combine references which is a modification of Flower by Carlson which Applicants respectfully maintain is improper. The Examiner must provide a motivation that modifies Carlson by Flower.

Fourth, Applicants respectfully maintain the rejection is improper because there is no suggestion in the prior art to combine the references as required by *Karsten Mfg. Corp. v. Cleveland Gulf Co.*, 242 F.3d 1376, 1385, 58 U.S.P.Q.2d 1286, 1293 (Fed. Cir. 2001) which states “In holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention.” The alleged motivation “Carlson would improve the system of Flower” does originate from prior art but has been supplied by the Examiner. Therefore, the Examiner has not established his *prima facie* case of obviousness.

Fifth, Applicants point out Carlson in col. 3 lines 38-43 and col. 4 lines 39 and 40 teaches testing and replacing only failed elements, while Flower in col. 3 lines 24-27, col. 3 lines 41-44 and col. 4, lines 24-29 that entire integrated circuit is rendered unusable when the timeout occurs. Applicants claim 12 requires “repairing said repairable circuit before both (i) said repairable circuit element fails and (ii) when said cycle counter reaches a pre-determined count of pulses.” Therefore, since Carlson teaches repair after failure and Flower discards rather than repairs the

device before failure, Applicants maintain that one of ordinary skill in the art would not look to the cited combination as both references teach away from Applicants invention. (e.g. Carlson repair after fail versus Applicants repair before fail) and (Flower discard the device after timeout versus Applicants repair after timeout.)

Based on the preceding arguments, Applicants respectfully maintain that claim 12 is not unpatentable over Carlson in view of Flower and are in condition for allowance.. Since claims 13-22 depend from claim 12, Applicants respectfully maintain that claims 13-22 are likewise in condition for allowance.

As to claim 15, the Examiner stated “Flower teaches a memory circuit for storing a cycle count [EEPROM] col. 4, line 43.”

First Applicants point out that the EEPROM 26 of Flower stores information from duration timer 32 not life timer 52 and that information is related to treatment not a count from the duration timer as the Examiner alleges. See, for example, Flower col. 3, lines 45-48 which states “ The iontophoretic drug delivery of the present invention also includes an EEPROM, having sufficient memory, coupled to the microprocessor for recording a date, time and or duration of usage by the patient.” There is no teaching in Flower that EEPROM 26 stores a count or that Flower has the capability for “storing a cycle count of a number of cycles counted since an initial power up in a memory circuit” as Applicants claim 15 requires.

Second, Applicants respectfully point the Examiner has not taken into all the limitations of Applicants claim 15, to wit “and to resume resuming counting from said stored cycle count after a power down/power up cycle of said integrated circuit.” Applicants point out that Flower does not have the capability of storing a count and resuming from the stored count, and that in

fact, Flower has no need to resume from a stored count, because Flower is always powered and always counting from the day of manufacture. See Flower col. 3. lines 38-39 which states “when the clock has timed 5 years from the date of manufacture.”

Based on the preceding arguments, Applicants respectfully maintain that claim 15 is not unpatentable over Carlson in view of Flower and is in condition for allowance.

As to claim 17, the Examiner stated that “it would have been obvious to one of ordinary skill in the art to comprise a subset of bits encoding a current count.” First Applicants point out that neither Carlson or Flower teach or suggest “wherein said trigger signal comprises a subset of a set of bits encoding a current cycle count of said cycle counter” as Applicants claim 17 requires. Second, the Examiner has provided no evidence or reason that one of ordinary skill in the art would inherently perform such a modification of Carlson in view of Flower and thus has impermissibly shifted the burden of proof from the Examiner to Applicants.

Based on the preceding arguments, Applicants respectfully maintain that claim 17 is not unpatentable over Carlson in view of Flower and is in condition for allowance.

As to claim, 22, the Examiner stated “it would have been obvious to one of ordinary skill in the art to provide a redundant circuit counter.”

First point out that Carlson teaches a in FIG. 2a, a single logic block selector 230 and in FIG. 2, Flower teaches a single controller circuit 20 that contains life timer 52. Further, the life timer 52 of flower does not contain a cycle counter as argued *supra*, therefore could not contain a redundant cycle counter.

Second, there is no teaching in Carlson of both “repairing said repairable circuit element ...when said cycle count reaches said *predetermined cycle count*” as in Applicants claim 12, and “automatically replacing said cycle counter with said redundant cycle counter when said cycle counter reaches *a fixed cycle count*” as in Applicants claim 22 which depends from Applicants claim 12. Carlson has one count, Applicants have two counts. Therefore, Carlson cannot teach or suggest “automatically replacing said cycle counter with said redundant cycle counter when said cycle counter reaches a fixed cycle count” as Applicants claim 22 requires.

Third, the Examiner has provided no evidence that one of ordinary skill in the art would perform such a modification to Carlson. Applicants point out while the Examiner alleges Flower teaches “integrated circuits have limited lifetimes,” Applicants point out that the logic block selector of Carlson is rarely used (because the repair is effected by logic block selector 230 blowing address fuses or setting jumpers and then is not required) and thus would not be expected to fail. The Examiner has provided no why reason one of ordinary skill in the art would believe such a rarely used circuit would fail (see Carlson col. 3, lines 2-5 and lines 17-19) and thus has impermissibly shifted the burden of proof from the Examiner to Applicants. Based on the preceding arguments, Applicants respectfully maintain that claim 22 is not unpatentable over Carlson in view of Flower and is in condition for allowance.

## CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invite the Examiner to contact the Applicants' representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 09-0456.

Respectfully submitted,  
FOR: Bonaccio et al.

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